



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/600,646	06/23/2003	Durk-Hyun Cho	1293.1791	6156

21171 7590 01/21/2005

STAAS & HALSEY LLP
SUITE 700
1201 NEW YORK AVENUE, N.W.
WASHINGTON, DC 20005

EXAMINER

BRASE, SANDRA L

ART UNIT	PAPER NUMBER
----------	--------------

2852

DATE MAILED: 01/21/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/600,646

Applicant(s)

CHO ET AL.

Examiner

Sandra L. Brase

Art Unit

2852

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 November 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,5,6,8,9 and 14 is/are rejected.
- 7) ☒ Claim(s) 2-4,7,10-13 and 15 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 November 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1 and 9 are rejected under 35 U.S.C. 102(b) as being anticipated by Foote et al. (US 6,339,211).
3. Foote et al. (...211) disclose a fusing device and of an electrophotographic image forming apparatus, the device comprising: a fusing unit (12) which includes a heating portion (col. 5, lines 21-29), a fixing frame (col. 5, lines 31-48) which fixes and supports the heating portion at one side, and a fusing film (104) sliding along a circumference of the fixing frame; and a pressing roller (48) which presses the fusing film to the heating portion to slide the fusing film; wherein the heating portion is in contact with the pressing roller and forms a fusing nip portion having a predetermined width (figure 2). A heating portion includes a heat pipe (102), where both ends of which are sealed and in which a predetermined amount of working fluid is contained (col. 6, lines 8-17). A method of fusing an electrophotographic image in an image forming apparatus, the method comprising: heating a heating portion contiguous to a path over

Art Unit: 2852

which a material having an electrophotographic image passes (col. 4, lines 44-54; and col. 5, lines 21-29); fixing an supporting a fixing frame to facilitate sliding a fusing film along a circumference of the fixing frame (col. 5, lines 31-48); and pressing the fusing film to the heating portion to slide the fusing film so that a fusing nip portion having a predetermined width is formed (figure 2). A heat of the heating portion is controlled by using a predetermined amount of a working fluid in a heat pipe of the heating portion to absorb heat (col. 6, lines 38-67).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 5, 6 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Foote et al. (US 6,339,211) in view of Okabayashi et al. (US 5,999,764).

6. Foote et al. (...211) disclose the features mentioned previously, but do not disclose the claimed heater that heats the pressing roller. Okabayashi et al. (...764) disclose a fusing device and method including a heater (37) that heats a pressing roller, and is placed inside the pressing roller. The heater is a halogen lamp (col. 3, line 67 – col. 4, line 3). It would have been obvious to one of ordinary skill in the art at the time of the invention to have the claimed heater that heats the pressing roller, as disclosed by Okabayashi et al. (...764), since such is well known in the art to heat a fusing nipping area to a uniform temperature.

Art Unit: 2852

7. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Foote et al. (us 6,339,211) in view of Kawata et al. (US 5,932,125).

8. Foote et al. (...211) disclose the features mentioned previously, but do not disclose manufacturing the fixing frame by injection molding. Kawata et al. (...125) disclose manufacturing a fixing component by injection molding (col. 3, lines 14-17). It would have been obvious to one of ordinary skill in the art at the time of the invention to have the fixing frame by injection molding, as disclosed by Kawata et al. (...125), since it is well known in the art to use this manufacturing technique to form an element in a fusing device.

Allowable Subject Matter

9. Claims 2-4, 7, 10-13 and 15 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

10. Applicant's arguments filed 11/16/04 have been fully considered but they are not persuasive.

Applicant argues that Foote et al. (US 6,339,211) do not disclose a heat pipe where both ends are sealed and in which a predetermined working fluid is contained, and using a predetermined amount of a working fluid in a heat pipe of the heating portion to absorb heat. This is incorrect as explained in the above rejection Foote et al. (...211) disclose a heat pipe

Art Unit: 2852

where both ends are sealed and in which a predetermined working fluid is contained (col. 6, lines 8-17), and using a predetermined amount of a working fluid in a heat pipe of the heating portion to absorb heat (col. 6, lines 38-67).

Final Rejection

11. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Inquiry

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sandra L. Brase whose telephone number is (571) 272-2131. The examiner can normally be reached on Monday-Thursday and alternate Fridays.

Art Unit: 2852

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Arthur T. Grimley, can be reached on (571) 272-2136. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Sandra L. Brase
Primary Examiner
Art Unit 2852

January 13, 2005